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# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,230	07/02/2001	Tomoko Atagi	NAK1-BP28	9025

7590

09/24/2002

Joseph W. Price  
PRICE, GESS & UBELL  
2100 S.E. Main St., Ste. 250  
Irvine, CA 92614

EXAMINER

TRAN, CHUC

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/897,230

Applicant(s)

ATAGI, TOMOKO

Examiner

Chuc D Tran

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-22 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5-7 and 9-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al (USP. 5,801,483).

Regarding claims 1-22, Watanabe et al disclose a fluorescent lamp having visible and UV radiation comprising:

- a glass tube (2) is made of a soda glass (Col. 2, Line 62) having a phosphor layer (7) formed on an inner surface of the glass tube (Col. 3, Line 22) and mercury and rare gas (Col. 3, Line 13-16) (Fig. 1);
- an electrodes (4) that cause an electrical discharge within the fluorescent tube (Col. 3, Line 1);
- the glass tube (2) contains an emissive oxide element (Col. 3, Line 32-42), wherein the glass material contains .01wt% to 10wt% of an oxide (Col. 4, Line 40);
- when exposed to first ultraviolet light that is emitted due to mercury excitation, second ultraviolet light that has a longer wavelength than the first ultraviolet light (Col. 4, line 18); wherein the emissive element emits visible light together with the second ultraviolet light (Col. 4, Line 19-21);
- wherein a thickness of phosphor layer is below 20mu (Col. 6, Line 34); and

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- an entire luminous flux emitted from the fluorescent lamp (See Table I, Col. 6, Line 5).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (USP. 5,801,483).

Regarding claim 4, Watanabe et al disclose a fluorescent lamp having visible and UV radiation set forth in the claims except a thickness of the glass tube is 0.62mm or less. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the thickness of the tube in order to reduce the cost and the weight of the lamp.

***Allowable Subject Matter***

5. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Prior art fails to disclose or suggest the glass material contains 0.01wt% to 0.5wt% of at least one element selected from the group consisting of thallium, stannum, plumbum, and bismuth.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Citation of relevant prior art***

6. Prior art Trushell (USP. 5,552,665) disclose an electric lamp having an undercoat for increasing the light output of a luminescent layer.

Prior art Watanabe et al (USP. 5,801,483) disclose a fluorescent lamp having visible and UV radiation.

Prior art Maloney et al (USP. 4,079,288) disclose an alumina coatings for mercury vapor lamps.

Prior art Watanabe et al (USP. 5,604,396) disclose a luminescent material for mercury discharge lamp including phosphor and a continuous protective layer.

Prior art Jennato et al (USP. 5,666,031) disclose a neon gas discharge lamp and method of pulsed operation.

Prior art Matsuo et al (USP. 5,869,927) disclose a fluorescent lamp with a mixed layer containing phosphor and metal oxide.

Prior art Hanlet (USP. 4,356,428) disclose a lighting system.

Prior art Rudolph Nagy (USP. 3,617,357) disclose a lamp envelope with a thin transparent buffer film on its inner surface.

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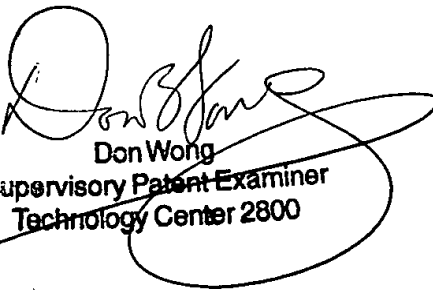
*Inquiry*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D Tran whose telephone number is (703)306-5984. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (703)308-4856. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-4048 for regular communications and (703)308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

TDC  
September 17, 2002

  
Don Wong  
Supervisory Patent Examiner  
Technology Center 2800